District 03 Mobility Performance Report

2016 Third Quarter

DEPARTMENT OF TRANSPORTATION

October 27, 2016
Office of Freeway Operations

District 03 Mobility Performance Report

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EXECUTIVE SUMMARY

Overview

Caltrans District 3 contains eleven counties that are located in northern California. Most of its congestion and delay take place in urbanized counties of Sacramento, Yolo and Placer.

The Mobility Performance quarterly analysis compares information with over a year ago and over last quarter in the following performance measures:

- Bottleneck Locations
- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (equivalent lost productivity)
- Detector Health

This information is based on data collected every day of the quarter, twenty–four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The Mobility Performance Report (MPR) presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In 2016 Third Quarter, total delay equaled 1.1 million vehicle hours of delay (VHD) at the 35 mph speed threshold, and 3.2 million VHD at the 60 mph threshold. The average weekday delay experienced in this quarter was approximately 15 thousand VHD at 35 mph, and 43 thousand VHD at 60 mph.

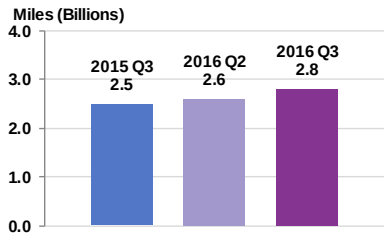
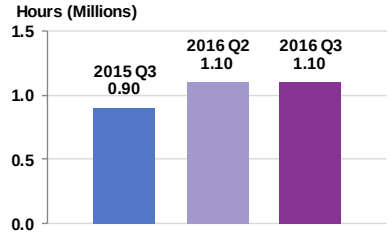
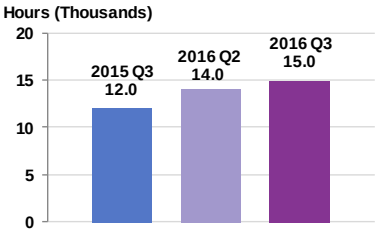
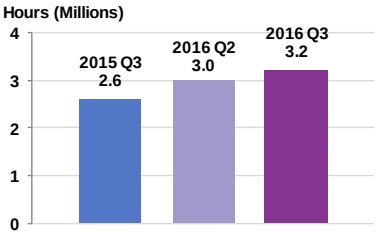
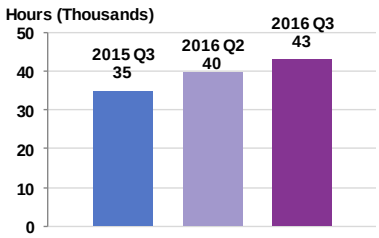
Top Ten Bottlenecks for 2016 Third Quarter

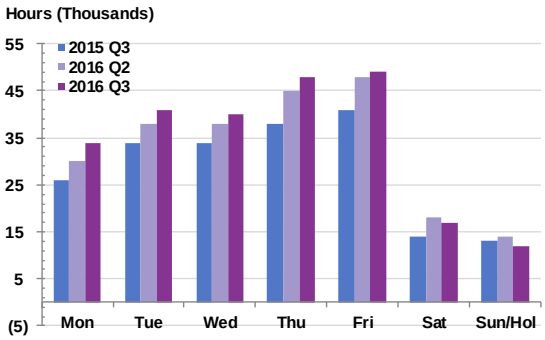
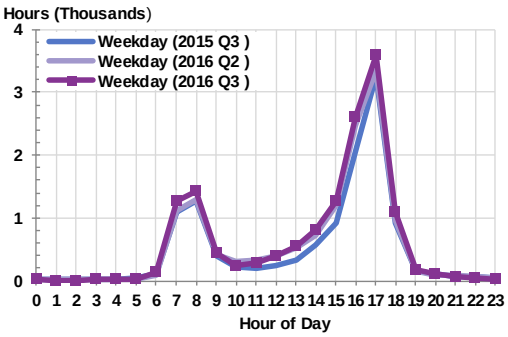
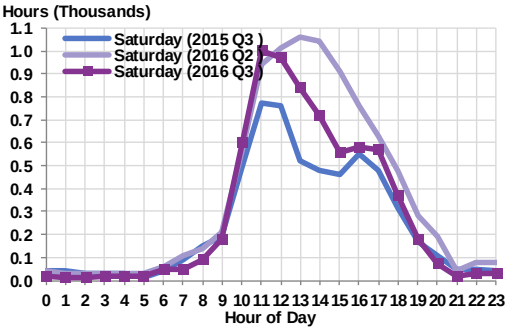
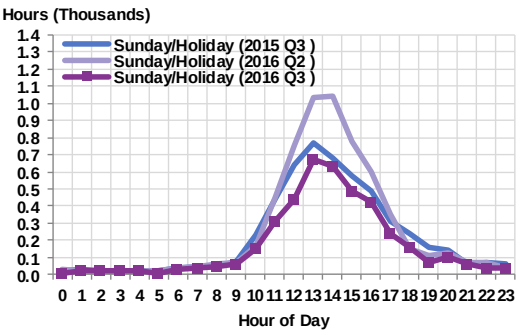
Fwy	Location	Shift	Abs PM	CA PM	# Days Active	Average Extent (Miles)	Total Delay (veh-hrs)	Total Duration (minutes)
I80-E	E of CR 105d	PM	76.688	4.501	43	4.5	43,188	5,475
US50-E	Stockton Blvd.	PM	6.345	R.711	63	2.3	34,176	6,275
SR99-S	EB Consumnes River	PM	290.643	16.198	59	1.8	30,581	11,580
US50-W	15th St	PM	4.507	L1.351	46	2.3	29,769	6,370
US50-E	48th St.	PM	7.087	R1.453	37	3.7	25,602	2,545
SR51-N	North of A St.	PM	2.000	2.000	64	1.3	25,344	7,530
SR99-N	EB 47th Ave	AM	295.270	20.800	59	3.7	22,928	3,590
SR51-N	NB Fulton Ave.	PM	6.870	6.870	64	1.7	21,114	7,290
SR160-S	51/160 IC	PM	49.350	46.749	63	0.7	21,011	13,460
SR51-N	SB Watt Ave.	PM	7.850	7.850	45	2.9	20,686	4,955

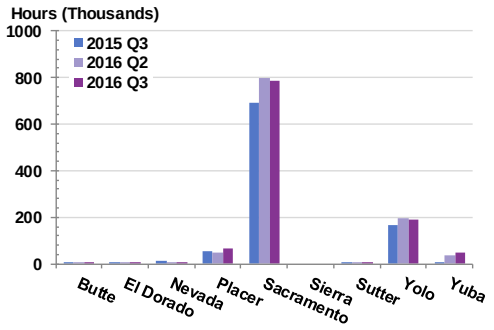
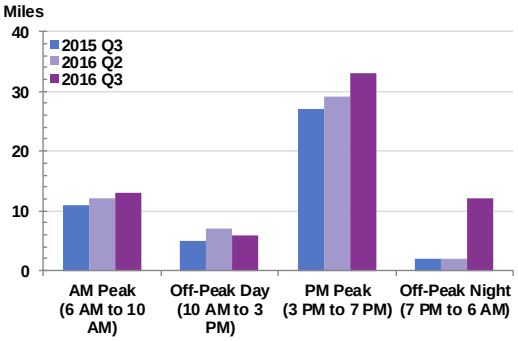
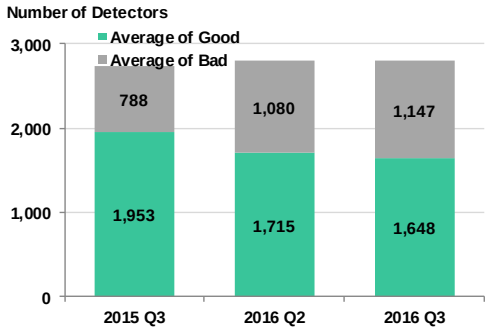
Note: For the table above the quarterly delay calculation was based on 60 mph threshold, AM or PM weekday peak period.

Caltrans District 3, has plans to build HOV lanes on I-5, US-50, and SR-51 near downtown Sacramento. These projects would reduce delay on nearby bottlenecks identified above. However, these HOV projects are funded for PS&E only while Construction funds are not available at this time.

Quarterly Mobility Statistics

Measure	Graph	Percentage Change		Units
		Over one year ago	Over last quarter	
Vehicle Miles of Travel (VMT)		10.4%	4.8%	billion
Total Vehicle Hours of Delay (VHD) at 35 mph		16.2%	1.1%	million
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		19.9%	6.7%	thousand
Total Vehicle Hours of Delay (VHD) at 60 mph		22%	5.4%	million
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		24.4%	7.3%	thousand

Measure	Graph	Percentage Change		
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Sun/Hol -4.6%	Largest Magnitude Decrease over last quarter Sun/Hol -11.1%	thousand
		Largest Magnitude Increase over one year ago Thursday 26.2%	Largest Magnitude Increase over last quarter Monday 14.3%	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 4 AM -47.7%	Largest Magnitude Weekday Decrease over last quarter 10 AM -17.5%	thousand
		Largest Magnitude Weekday Increase over one year ago 4 PM 26.5%	Largest Magnitude Weekday Increase over last quarter 5 PM 6.8%	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 8 AM -40%	Largest Magnitude Saturday Decrease over last quarter 3 PM -38.8%	thousand
		Largest Magnitude Saturday Increase over one year ago 1 PM 62.6%	Largest Magnitude Saturday Increase over last quarter 11 AM 7.1%	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 12 PM -31%	Largest Magnitude Sun./Holiday Decrease over last quarter 2 PM -39%	thousand
		Largest Magnitude Sun./Holiday Increase over one year ago 3 AM 0.3%	Largest Magnitude Sun./Holiday Increase over last quarter 6 PM 11.4%	

Measure	Graph	Percentage Change		
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago Nevada -97.2%	Largest Magnitude Decrease over last quarter Sacramento -1.4%	thousand
		Largest Magnitude Increase over one year ago Sacramento 13.9%	Largest Magnitude Increase over last quarter Placer 31.3%	
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago –	Largest Magnitude Decrease over last quarter Off-Peak Day -7.7%	actual numbers
		Largest Magnitude Increase over one year ago Off-Peak Night 620%	Largest Magnitude Increase over last quarter Off-Peak Night 621.3%	
Average Number of Good and Bad Detectors		Change in Good over one year ago -16%	Change in Good over last quarter -4%	
		Change in Bad over one year ago 46%	Change in Bad over last quarter 6%	

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2016 Q3-2015 Q3		Difference 2016 Q3-2016 Q2		Rank		
Route	County	2015 Q3	2016 Q2	2016 Q3	Absolute	Percentage	Absolute	Percentage	2015 Q3	2016 Q2	2016 Q3
SR51	Sacramento	231,694	289,734	256,452	24,759	10.7%	-33,282	-11.5%	1	1	1
US50	Sacramento	148,403	175,009	170,830	22,426	15.1%	-4,179	-2.4%	3	2	2
SR99	Sacramento	154,622	155,609	164,477	9,855	6.4%	8,868	5.7%	2	3	3
I80	Yolo	98,503	109,724	135,549	37,046	37.6%	25,825	23.5%	4	4	4
I5	Sacramento	81,267	107,199	120,751	39,484	48.6%	13,552	12.6%	5	5	5
US50	Yolo	21,944	41,566	50,429	28,485	129.8%	8,863	21.3%	9	6	6
I80	Placer	43,347	27,535	47,617	4,270	9.9%	20,082	72.9%	7	11	7
SR70	Yuba	3,782	33,845	47,039	43,257	1143.7%	13,194	39.0%	16	9	8
I80	Sacramento	54,744	40,692	40,343	-14,400	-26.3%	-349	-0.9%	6	7	9
SR160	Sacramento	18,535	27,724	31,911	13,376	72.2%	4,187	15.1%	10	10	10
SR65	Placer	11,726	21,026	16,130	4,404	37.6%	-4,897	-23.3%	13	12	11
SR99	Butte	4,143	1,729	2,640	-1,503	-36.3%	912	52.7%	15	15	12
SR113	Yolo	28,545	39,833	2,471	-26,073	-91.3%	-37,362	-93.8%	8	8	13
I5	Yolo	16,020	1,758	2,216	-13,804	-86.2%	458	26.0%	11	14	14
US50	El Dorado	6,403	1,356	616	-5,787	-90.4%	-740	-54.6%	14	16	15
SR99	Sutter	836	78	614	-222	-26.5%	537	692.6%	17	17	16
I80	Nevada	13,661	4,025	377	-13,284	-97.2%	-3,649	-90.6%	12	13	17
I80	Sierra	0	0	0	0		0				
SR12	Sacramento	0	0	0	0		0				
SR275	Yolo	0	1	0	0		-1	-100.0%		18	
TOTALS		**938,172**	**1,078,443**	**1,090,461**	**152,290**	**16.2%**	**12,018**	**1.1%**			

SR-99 in Sutter County had the highest rate of increase in delay with 693% when comparing with previous quarter. The increase in delay was contributed by recover of detection system which is brought back to operation after it was out of service for months.

As identified by the congestion table above, there was a 16.2% increase in delay when comparing the same quarter with the previous year; and the VMT was 10.4% higher. The increase in delay could be caused by higher traffic demand since the VMT was significantly higher.

Based on the total delay by route, SR-51 is the worst performing freeway in District 3. The district is exploring the best possible ways to reduce the delay in the affected areas. The SAC-80 HOV lane project is going to be completed by end of this year. When this major construction project is completed, the performance of nearby freeways would be improved with less detour traffic.